Bureau de soutien
de l'examen public
du projet Grande-Baleine

Great Whale
Public Review
Support Office

GUIDELINES FOR THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED GREAT WHALE RIVER HYDROELECTRIC PROJECT

BACKGROUND INFORMATION

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TECHNICAL NOTES ON THE GUIDELINES AND THE ENVIRONMENTAL ASSESSMENT PROCESS

THE GUIDELINES

Scope of the Guidelines

The Guidelines for the proposed Great W[illegible] Hydroelectric Project, made public on September 10, 1992, follow current trends w[illegible] emphasize both the environment and the development of communities. The Guidelines subscribe to the precepts of sustainable development, while at the same time highlighting other aspects which take into account the fact that the proposed project concerns a northern milieu in a multicultural environment, and represents an energy choice for Québec society.

The Guidelines have been informed by oral testimony given during public hearings as well as by testimony submitted in the form of briefs. Both have been essential tools in delimiting the inventory of knowledge relevant to the study of the proposed project's impacts, as well as to the identification of the anticipated impacts on the biophysical and social environment. The Guidelines advocate a multicultural approach with regard to the description and notion of the environment, as well as with regard to the identification and study of the anticipated impacts.

The Guidelines supply definitions, in operational terms, of the critical issues of project assessment and call for a study of the cumulative impacts associated with this proposed project.

Structure of the Guidelines

The Guidelines are organized with respect to current and classic practices, although they contain a number of innovative elements. The Guidelines require that Hydro-Québec justify the proposed project, describe the milieu or current state of the environment in which it would be located, describe the proposed project, specifying the localization of power stations, reservoirs, spillways, and so on, and then, by the superimposition of the proposed project on the milieu, assess the proposed project's impacts on the biophysical and social environment. Finally, the Guidelines ask Hydro-Québec to present plans for mitigative and compensatory measures as well as plans for environmental surveillance, monitoring, and long-term management programs in the region affected by the proposed project.

Justification of the proposed project

For the purposes of justifying the proposed project, Hydro-Québec is asked to present detailed energy demand growth forecasts for the next 30 years, followed by a survey of all possible alternatives for meeting this anticipated growth in demand. Hydro-Québec must then demonstrate the rationale for choosing the Great Whale Project from among other energy alternatives in general, and from among hydroelectric alternatives in particular. The Guidelines stress the fact that Hydro-Québec must carry out a least-cost analysis for all energy alternatives. This involves the integrated planning of resources and a comparison on an equal basis of different production sources, such as the construction of dams, and of sources related to demand management, such as policies and programs of energy efficiency and conservation.

Native knowledge

The Guidelines require Hydro-Québec to characterize Native knowledge with respect to the biophysical and social environment. No description of the environment can ever be complete and exhaustive. Thus, it is preferable to carry out a systematic description focused primarily on valued ecosystem components. These are generally defined as ecosystem qualities or elements, the identification of which are of public concern regarding social, cultural, economic or aesthetic values, as well as those that are scientific. The Guidelines stress the fact that the description of the different environments to be carried out by Hydro-Québec shall take into account the knowledge of, and attitudes toward, the environment specific to the Cree and Inuit cultures. This will allow the components valued by these groups to be highlighted or emphasized.

An integrated approach

The Guidelines were also drawn up with the understanding that the project would not be built until the twenty-first century. In order to facilitate the long-term projection of the anticipated impacts, the Guidelines adopt a systemic approach, emphasizing the effects of the interaction of impacts as much as their nature. An approach of this kind is based on the integrated contribution of a large number of scientific disciplines and varied kinds of knowledge.

Evaluation issues

The approach taken by the Guidelines requires that the principal issues of the impact study be defined. As specified by the Guidelines, these issues are: 1) the health of all human and animal communities in the region; 2) access to the territory by all human and animal populations, including the caribou; 3) the availability of resources; 4) the maintenance of

social cohesion at the local, regional and national level; and 5) the respect for values. This last issue includes the concern for preserving the ecosystem, the preservation of unique and remarkable sites, the maintenance of cultural diversity and improving the quality of life in the region.

Cumulative impacts

It is impossible to consider a project's impact or, in the case of a mega-project, its elements as though we were dealing with an isolated project or separate entities. The cumulative and interactive effects of the different impacts must be taken into consideration. The juxtaposition of several specific impacts on individual elements of an ecosystem can lead to a series of impacts having a far greater effect than the sum of their parts. Additive or synergetic effects may arise, as well as ripple effects caused by a combination of impacts. One of the specific aspects of the Guidelines focuses on the identification and study of cumulative impacts; the Guidelines require Hydro-Québec to undertake a systematic evaluation of the combined and cumulative effects of the various anticipated impacts on specific ecosystem elements. In this way, for example, Hydro-Québec shall evaluate the cumulative effects of the proposed Great Whale Project on contamination levels or marine currents in Hudson Bay, taking into account the existing La Grande project and the Churchill-Nelson and Conawapa projects in Manitoba.

THE ENVIRONMENTAL ASSESSMENT PROCESS

Memorandum Of Understanding

The Great Whale Project environmental review process is framed by a four-party *Memorandum of Understanding* signed in January 1992 by the governments of Québec and Canada and representatives of the Cree and Inuit of Québec. This *Memorandum* provides for the coordination and harmonization of the environmental and social review procedures pursuant to the *James Bay and Northern Québec Agreement* (JBNQA) as well as the *Federal Environmental Assessment and Review Process Guidelines Order*. To that effect, the *Memorandum* created the Great Whale Public Review Support Office. The *Memorandum of Understanding* also specifies that a global assessment and review of the Project be undertaken.

Assessment and review bodies arising from the JBNQA

In accordance with the JBNQA, several review bodies have been established whose purpose is to undertake an environmental and social assessment of development projects in the affected territory. Section 22 of the JBNQA covers developments south of the 55th

Parallel (territory inhabited mainly by the Cree), while Section 23 covers developments north of the 55e Parallel (territory inhabited mainly by the Inuit). Since the Great Whale Project straddles the 55e Parallel, the processes described in both of these sections apply.

The JBNQA provides for a federal and provincial review body to deal with the projects on either side of the 55e Parallel. With respect to Section 23, the provincial review body is the Kativik Environmental Quality Commission (**KEQC**), consisting of nine members, four of whom are Inuit representatives. The federal body is the Federal Review Committee North of the 55e Parallel (**FRC-North**), made up of five members, two of whom are Inuit representatives. Section 22 provides for the following review bodies: the Provincial Evaluating Committee (**COMEX**) and the Federal Review Committee South of the 55e Parallel (**FRC-South**), each consisting of five members, two of whom are Cree representatives.

In addition, Section 22 provides for an Evaluating Committee (**COMEV**) consisting of two Cree representatives, and two representative each from Québec and Canada. The Evaluating Committee is mandated to issue guidelines for the preparation of an environmental impact study; these guidelines cover impacts related to areas of federal competence as well as areas of provincial competence. During this phase, the Evaluating Committee acts generally as a substitute for the Provincial Evaluating Committee and the **FRC-South**, which assumes their responsibilities only after the impact study has been tabled. At that time, therefore, the Evaluating Committee's mandate with regard to the Great Whale project will expire.

The federal and provincial administrators of the JBNQA also play an important role in the environmental assessment process. The Environment minister of Québec is the provincial administrator of the JBNQA, while the chairman of the Federal Environmental Assessment Review Office is the federal administrator. Thus, the review bodies arising from the JBNQA submitted the Guidelines to the administrators, who approved them before submitting them to Hydro-Québec. In the same way, Hydro-Québec shall submit the impact study to the administrators, who shall then forward the study to the review committees and commissions in order that the environmental review of the Project may proceed.

The Federal Environmental Assessment and Review Process

In addition to the two regimes applicable to the Great Whale Project by virtue of the JBNQA, a third is also applicable: the *Federal Environmental Assessment and Review Process* (**FEARP**). Established in 1973 and updated in 1984 by publication of the **FEARP**

Guidelines Order, the **FEARP** principally governs projects run by federal departments and organizations. It also applies to other projects whose environmental repercussions may well affect spheres of federal competence. The Great Whale Project falls under this last

category, and for this reason the federal minister of the Environment, at the request of the minister of Fisheries and Oceans, established the three-member ***Federal Environmental Assessment Review Panel of the Great Whale Project Commission*** on August 15, 1991. It should be noted that the JBNQA's federal administrator decided to appoint the same three people as Canada's representatives to both the **FRC-North** and the **FRC-South**.

The **FEARP** is mandated by the federal environment minister to analyze the environmental and social repercussions of the Great Whale Project, in Québec as well as Hudson Bay. The **FEARP** shall also pay particular attention to the Project's impacts upon the inhabitants of the Belcher Islands, in the Northwest Territories.

Support Office

The Great Whale Public Review Support Office, created by virtue of the *Memorandum of Understanding*, aims to facilitate the harmonization of the work of the assessment and review bodies. In effect, the Support Office, whose work began in May 1992, provides technical, scientific and administrative support for the various committees and commissions. One of the Support Office's principal advisers was appointed by the Cree Regional Authority and another was appointed by the Makivik Corporation.

Under the direction of the chairmen of the review bodies, the Support Office coordinated the process which led to the publication of the Guidelines. The work of the Support Office will continue throughout the review of the proposed Project. The Office has an important role to play in keeping the public informed, and it houses a documentation centre where all documents related to the public review of the proposed Project can be consulted.

Preparing the Guidelines: from public hearings to publication

Beginning on January 27, 1992, the review bodies held joint public hearings focussing on the issues to be addressed in the Guidelines. These consultation sessions began in the communities of Whapmagoostui and Kuujjuarapik,where they lasted seven days. Subsequent sessions were held in the Inuit communities of Inukjuak, Umiujaq and Sanikiluaq, in the Belcher Islands (Northwest Territories), in the Cree community of Chisasibi, as well as in Val d'Or and Montreal. In all, the hearings lasted 23 days; 94 briefs were submitted and approximately 250 people made oral presentations. Transcripts from these public hearings may be consulted at the Support Office in Montreal, as well as in the libraries of Québec universities.

Following these public consultation sessions, Draft Guidelines were issued by the review bodies on April 30, 1992. During the months of May, June and July 1992, some 500 pages of commentaries were submitted to the Support Office. These written commentaries were studied carefully and taken into consideration during the drafting of the final

Guidelines. Included among those organizations and groups which submitted written commentaries on the Draft Guidelines were several government departments, academics, businesspersons, and numerous environmental groups from Québec, Canada and the United States. Written commentaries on the Draft Guidelines were also submitted by Hydro-Québec, the Grand Council of the Cree of Québec and the Makivik Corporation, an Inuit organization.

In accordance with the *Memorandum of Understanding*, each committee or commission acts as an independent entity. The various committees made considerable efforts, however, to reach a consensus on the Guidelines. As a result of these efforts, one set of Guidelines common to the four review bodies has been published. As they did while the Guidelines were being prepared, the committees and commissions shall continue to coordinate and harmonize their activities during the later phases of the public review of the Project.

Future phases

Now that the JBNQA administrators have submitted the Guidelines to Hydro-Québec, it is up to Hydro-Québec to undertake an environmental impact study which conforms to the Guidelines. Before undertaking the public review of the impact study, the committees and commissions shall analyze the study to ensure that it conforms to the Guidelines. If the study does not conform to the Guidelines, the committees and commissions will be able to question, and obtain further information from, Hydro-Québec.

The impact study shall be made public and, if it conforms to the Guidelines, public hearings could be held jointly by the review committees and commissions. It is during this phase that members of the public would be able to express their opinions on the Project's environmental impacts as well as its raison d'être. Hearings on the impact study would be held in several communities in Northern as well as Southern Québec in the same fashion as the public hearings held to address the scope of the Guidelines.

Once the public hearings are over, the review committees and commissions shall draw up their analyses and conclusions concerning the Great Whale Project. With the exception of the KEQC, which must render a decision, all groups shall submit recommendations concerning the eventual development of the Great Whale Project. Those committees established under the JBNQA shall submit their recommendations to the JBNQA's administrators, while the **FEARP** shall submit its conclusions to the federal Environment minister. Each committee or commission, in its report, recommendations or decision, shall address those issues within its sphere of competence.

October 1992

GLOSSARY[1]

anadromous fish	Fish that are found at different times in both fresh and salt water, generally returning upriver to spawn.
availability factor	The percentage of time that an energy resource is available for use.
avifauna	Birds.
bathymetry	The measurement of the depth of a body of water.
benthic community	Marine organisms that live on or near the bottom of bodies of water.
bioaccumulation	Process by which certain substances that are generally present in small quantities become more concentrated in a living organism.
BTU (British Thermal Unit)	A unit of heat (equivalent to 1055 joules).
capacity	The intensity of electric energy that can be delivered at any one moment (syn. *peak power*).
capacity-related hook-up charges	Fees charged to connect customers based on the capacity (or power) required.
Category I lands	Under the James Bay and Northern Quebec Agreement, Cree and Inuit villages surrounded by lands for exclusive Native use or ownership.
Category II lands	Under the JBNQA, public lands with exclusive Native hunting, fishing and trapping rights.
Category III lands	Under the JBNQA, public lands where Native people have unlimited hunting, fishing and trapping rights.

[1]The definitions in this glossary are provided solely in order to facilitate understanding of the Guidelines. They are not intended to guide the interpretation thereof.

collector system	A network linking hydroelectric generating facilities with the primary transmission system.
control reservoir	A reservoir used for regulation and control of river flow, or for inter-annual storage of water (syn. *regulating reservoir*).
design option	Alternatives with respect to particular elements of project design which have been left open.
direct overnight cost	What a physical asset would cost if it could be constructed instantaneously (i.e. no finance charges, etc.).
drainage basin	A geographic area that is naturally drained by one river system (syn. *river basin, watershed*).
ecotone	A transition zone between two ecosystems.
end-use model	Model for forecasting electricity demand based on forecasts for each end use (e.g. smelting, home heating, etc.).
estuary	The generally broad mouth of a watercourse, where the effects of both tides and currents can be observed.
externality	A cost or benefit which is not borne by the agent that caused it (e.g. costs borne by society or community as a whole).
firm energy	A quantity of energy that a utility is committed to deliver at all times during a given contract period. A firm energy contract thus implies guaranteed capacity.
flood discharge	Maximum discharge of a watercourse, expressed in cubic metres per second.
forebay	A channel or a natural watercourse that conducts water from a reservoir or river to a hydroelectric power station.

geochemical	Pertaining to the study of the natural occurrence, distribution and movement of chemical elements in the rocks, sediments, soils and waters.
geomorphology	The study of the surface features of the earth.
geotechnical	Pertaining to the scientific and engineering study of the stability of slopes and to the control of landslides, erosion and rock mass movements.
gigajoule	A unit of energy equal to a billion joules (equivalent to 277 kWh).
hatchery zone	Area of a stream, river or other body of water in which young fish (fry) are found.
hydrodynamic	Pertaining to the motion of fluids.
hydrological regime	A comparative study of incoming and outgoing water over a given territory or drainage basin (syn. *hydrologic balance*).
inter-annual storage	Reservoir storage capacity great enough to contain runoff from more than a single year. Draw-down and filling can thus be multi-year operations.
in utero	Within the uterus.
Kjeldahl nitrogen	The nitrogen content of a solution, as determined according to the Kjeldahl method.
lacustrine	Pertaining to lakes.
levelized cost	The total cost of a resource (including capital, financing, fuel, operation, maintenance and decommissioning costs) converted into a stream of equal annual payments spread out over its useful life.
limiting factor	An ecological factor that limits or blocks the development of an organism or plant community in a given region.
littoral drift	Movement of materials along the shores of a river or body of water, caused by winds or currents.

load	Total electrical impedance at any one moment over the entire system or grid.
load duration curve	A curve which indicates the percentage of time during which demand is greater than or equal to a given level.
load factor	Average energy output, as a percentage of installed capacity.
load forecast	The prediction of future load obtained through some type of model.
macrophytic vegetation	Aquatic plants with floating leaves.
optional marginal rate pricing	Pricing approach in which customers may choose to have additional consumption (or conservation) billed at the marginal cost of producing new electricity.
maximum/minimum operating level	Highest/lowest water level for a reservoir under normal operating conditions.
methylmercury	An organic form of mercury (CH_3Hg) produced as a result of certain types of microbial decomposition of plant matter.
neoplasm	A pathological proliferation of cells or tissues, usually manifested in the form of a tumour.
neurotoxicity	Toxicity to the nervous system.
paleoseismicity	The frequency and intensity of earthquakes in a given region during a given geologic period.
palsa (pl. *palsen*)	A mound of up to 6 metres in height produced by the formation of an ice lens in a bog. Palsen contain a high concentration of organic matter.
peat bog	A wet, acidic area rich in peat moss.
permafrost	Perennially frozen soil or ice.
pharmacokinetic	Pertaining to the study of the way that drugs move through the body.

physiographic sere	An evolving succession of plant communities in a given environment, leading to sustainable equilibrium.
phytoplankton	Microscopic plants that live suspended in water.
planktonic community	Phytoplankton and zooplankton living in a body of fresh or salt water.
plant community	All the plant species which present a homogeneous physiognomy and which colonize a common environment.
plume	The area around an estuary where fresh water from a river displaces marine salt water; usually turbid.
power	In electricity planning, used as synonym for capacity.
price elasticity	The variation in demand for a good as a function of price.
primary productivity	The total amount of organic matter produced yearly by all plants in a given region.
pycnocline	Water strata of differing salinities in a body of water.
remote sensing	The collection of data based on the analysis of images obtained by airplane or satellite. Aerial photography is the most common form of remote sensing.
reservoir	Artificial lake used to store and release water.
runoff	Amount of water that enters a river system from precipitation over a given period. Can be expressed in units of volume or in energy equivalents.
run-of-the-river power plant	A hydroelectric plant that has no sizeable storage reservoir.
salinity gradient	Variation of salinity in seawater as a function of distance or depth.
sand spit	A sandy projection extending into a body of water.

secondary productivity	The total amount of organic matter produced yearly by all animals in a given region.
sedimentological	Pertaining to the study of the nature, distribution, extent, and formation of sediment.
seismicity, seismic activity	Frequency and intensity of earthquakes in a given region during a given time period.
spawning ground	An area where fish congregate to breed.
spillway	A structure designed to release flood waters from a reservoir when maximum operating levels are reached and turbine capacity is insufficient to discharge the runoff.
system optimization model	A mathematical model (usually computerized) which replicates the operation of an electrical power grid, permitting optimization of system parameters.
tailrace canal	The passage that carries water away from the turbines in a hydroelectric power station.
tannin	A substance found in tree bark and other plants.
taxonomy	A system of classifying species.
taxonomic group	A unit in a classification system used in zoology or botany (e.g., class, order, family, genus, species).
thermal regime	The seasonal or long-term variations in temperature in a given environment.
topography	The two-dimensional representation of land-surface features.
toxicity	Property of a chemical substance that disrupts certain functions within an organism.
trace metals	Metallic elements found in the environment in quantities generally not exceeding a few hundred parts per million.

transmission line	Power lines used to transport large quantities of electricity over long distances.
turbidity	Cloudiness in water produced by the presence of fine suspended particles.
utilization factor	Measure of the degree to which a resource is used. In the case of electricity production, this corresponds to the ratio of the energy generated for a given period to the product of the installed capacity and the number of hours in this period (syn. *load factor*).
zooplankton	Microscopic animals that live suspended in water.

September 16, 1992

Bureau de soutien
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Great Whale
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Evaluating Committee (COMEV)

BIOGRAPHICAL NOTES

CHIEF BILLY DIAMOND (President)

Chief Diamond was a signatory of the James Bay and Northern Quebec Agreement and played a crucial role in the negotiations which led to its signing. Chief Diamond has numerous years of experience in political life and has been elected several times Grand Chief of the Grand Council of the Crees (of Québec). He is presently Chief of the Waskaganish Band and President of Air Creebec Inc. and has been appointed to the Order of Canada.

BRIAN CRAIK (Member)

Brian Craik is an anthropologist with many years of research in the Cree communities. He speaks fluent Cree and is presently the Director of Federal Relations for the Grand Council of the Crees (of Québec).

DANIEL BERROUARD (Member)

A biologist with the ministère de l'Environnement du Québec, Mr. Berrouard has been involved in the environment of Northern Québec for the past 15 years. He lived in the region for nearly 10 years during construction of Phase I of the La Grande complex, and is a member of several of the committees established by virtue of the James Bay and Northern Québec Agreement.

JACQUES MICHAUD (Member)

A geographer with the Government of Québec since 1973, Mr. Michaud has several years experience as a project analyst for the Direction des évaluations environnementales du ministère de l'Environnement.

JEAN ROBITAILLE (Member)

President of the Bureau d'écologie appliquée, Mr. Robitaille holds a Master's degree in applied biology. He has been working in the field of ecology, primarily with regard to aquatic environments, for 20 years.

BENOIT TAILLON (Member)

Benoit Taillon holds degrees in political science and public administration, and was Director of Corporate Affairs for the federal Department of the Environment between 1975 and 1987. Since 1988, Mr. Taillon has been working as a consultant in business and public affairs, notably in the field of the environment.

September 17, 1992

Kativik Environmental Quality Commission (KEQC)

BIOGRAPHICAL NOTES

PETER JACOBS (Chairman)

Professor of landscape architecture in the Faculty of Environmental Design and Urban Studies at the Université de Montréal, Mr. Jacobs has been chairman of the KEQC for nearly 12 years. He is a former chairman of the Environment Planning Commission of the International Union for the Conservation of Nature and Natural Resources (IUCN). He is also a member of the Québec Round Table on the Environment and Economy.

BERNARD ARCAND (Member)

Professor in the Department of Anthropology at Université Laval, Dr. Arcand has conducted and published numerous studies, notably on the Quiva Indians of South America.

DANIEL BERROUARD (Member)

A biologist with the ministère de l'Environnement du Québec, Mr. Berrouard has been involved in the environment of Northern Québec for the past 15 years. He lived in the region for nearly 10 years during construction of Phase I of the La Grande complex, and is a member of several of the committees established by virtue of the James Bay and Northern Québec Agreement.

BERTRAND BOUCHARD (Member)

Engineer and Head of Dam Safety Service with the ministère de l'Environnement du Québec, Mr. Bouchard is a hydrology specialist. He has also worked with the ministère de l'Environnement's conservation council.

GILLES HARVEY (Member)

Wildlife biologist with the ministère du Loisir, Chasse et Pêche du Québec for the past 13 years, Mr. Harvey has occupied several professional and administrative positions with the Direction régionale du Nouveau-Québec, the Direction générale de la ressource faunique , and on certain Native matters.

GEORGES SIMARD (Member)

A geological engineer who holds a Master's degree in earth sciences, Mr. Simard has been with the ministère de l'Environnement du Québec since its inception, where he has been involved with the ministry's waste management and elimination programs.

DAVID OKPIK (Member)

Currently the mayor of Quaqtaq, Mr. Okpik is a respected Inuit hunter and fisherman. He has been involved in Inuit politics for many years.

IOSEPI PADLAYAT (Member)

Currently the assistant to the president of Air Inuit, Mr. Padlayat founded the Taqramiut Nitingat Inc. (TNI) and the Inuit Broadcasting Corporation. Mr. Padlayat also plays an active role in the Nunavik Education Task Force.

MARY SIMON (Member)

Currently representing the Inuit people in the constitutional talks, Dr. Simon is a former president of the Makivik Corporation as well as a former president of the Inuit Circumpolar Conference. Dr. Simon is also a board member of the Inuit Tapirisat, a national organization representing the Inuit of Canada.

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BIOGRAPHICAL NOTES

PAUL LACOSTE (Chairman)

Dr. Paul Lacoste holds undergraduate degrees in philosophy and law from the Université de Montréal and a doctorate from the Université de Paris. Dr. Lacoste is an Officer of the Order of Canada, a chevalier of the Légion d'honneur, and an honorary doctor of the universities of McGill, Toronto, and Laval. Rector of the Université de Montréal from 1975 to 1985, Dr. Lacoste also taught philosophy and law at the university. From 1965 to 1971, he was a member of the Royal Commission on Bilingualism and Biculturalism. In 1988, Dr. Lacoste was president of the committee reviewing the environmental assessment process of the ministère de l'Environnement du Québec.

CLAUDE E. DELISLE (Member)

Claude Delisle holds a doctorate in biology, and is a professor of environmental engineering at Montreal's École Polytechnique. In recent years, he has studied the problems of acid rain and heavy metals in Northern Québec. He was also a member of the Kativik Environmental Advisory Committee.

R. GRANT INGRAM (Member)

Grant Ingram holds a doctorate in physical oceanography and is a professor at McGill University. He has studied the coastal and estuarine areas of eastern Hudson Bay and James Bay. His current research focusses on the role of hydrodynamics on the control of biological oceanographic processes and environmental changes resulting from river flow modifications.

September 17, 1992

Federal Review Committee North of the 55th Parallel

BIOGRAPHICAL NOTES

PAUL LACOSTE (Chairman)

See Federal Environmental Assessment Review Commission.

CLAUDE E. DELISLE (Member)

See Federal Environmental Assessment Review Commission.

R. GRANT INGRAM (Member)

See Federal Environmental Assessment Review Commission.

JULES DUFOUR (Member)

A geographer specializing in the environment and the management of natural resources, Mr. Dufour has conducted research on Northern Québec, notably on the exploitation of boreal forests and on the establishment of protected areas. Mr. Dufour is a member of the Canadian committee for UNESCO's Man and Biosphere Program and a member of the research committee for Canada's Global Warming Science Program.

JOBIE WEETALUKTUK (Member)

Jobie Weetaluktuk is an information officer with the Kativik Regional Council of Health and Social Services. He is also a member of the PCB Surveillance Committee of the Kativik region of Québec. A journalist by training, Mr. Weetaluktuk has worked as a television, radio and magazine reporter, as well as a photographer. During his career as a journalist, he covered environmental and environmental health issues in Northern Québec.

September 17, 1992